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ABSTRACT

Existing programs, policies and practices as they affect the older adult student in Ontario universities were investigated. Interview data were collected from adult students about their experiences in the light of the policies described, and a number of obstacles to successful study encountered by these students were identified. A statistical analysis, based on data collected at Lakehead University, compared the academic performance of adult students to that of regular students. In addition, the relationship between adult academic performance and such demographic variables as age, sex, marital status, matriculation status, part-time study, and residency (in or out of the university district) was investigated. The analysis revealed that the mean academic performance of adult students (age 25 and over) was significantly higher ($p<.01$) than that of the regular college-age students. With regard to previous studies which had suggested that "mature students" (non matriculated adults) achieved at a higher level than regular students, the findings in the present study were in the same direction but not statistically significant. There were marked differences between sub-populations of adult males and females and married and single students. Matriculation status at the time of admission, and attendance part-time or full-time appeared to have no significant influence on the academic achievement of adult students. Suggestions for further research were made. (Author)

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FACTORS AFFECTING ACADEMIC ACHIEVEMENT OF ADULT STUDENTS ENROLLED IN ONTARIO UNIVERSITY CREDIT COURSES

A Pilot Project

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in co-operation with O. I. S. E.

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Foreword

Someone once said that the best contemporary embodiment of an American myth is Nikita Khrushchev. They were referring to the fact that the Russian leader never went to school in the usual sense; all his formal education occurred after he was twenty years of age, as a part-time and mature student.

The achievements of such students, (compare also with Abraham Lincoln and, in Canada, Louis de Wolfe) have always been recognized as part of an heroic myth. But the numbers of such students, the quality of their work, the needless difficulties that they are made to encounter, these facts, though readily obtainable, are rarely considered. Many, perhaps most college and university administrators think of older students at best as people to be tolerated. And this is how many are treated at most institutions. And yet this attitude runs counter to the administrator's experience of his own learning, and experience with that remarkable group of older students who came to the universities after World War I and particularly after World War II. Some administrators sigh with nostalgia about the classes of 1946,.1947, 1948, and then proceed to build or keep barriers in the face of able older students today.

This study, conducted by Peggy Beagle at Lakehead University, through its records of the achievements of older students and its collection of their experiences and views, provides fresh evidence about the quality of their work. It also suggests some of the steps that should be taken at once if these able students are to be enabled to perform up to the level of their capacity.

While the Department of Adult Education claims no credit for the study, which was carried out by the author under the supervision of Dr. W. T. Melnyk, Chairman of the Department of Psychology at Lakehead University, many of the data and observations were collected through her association with OISE. We welcome this collaboration and are pleased to be able to distribute the findings of the study as an important contribution to higher and adult education.

Abstract

Existing programs, policies and practices as they affect the older adult student in Ontario universities were investigated. Inverview data were collected from adult students about their experiences in the light of the policies described, and a number of obtstacles to successful study encountered by these students were identified. A statistical analysis, based on data collected at Lakehead University, compared the academic performance of adult students to that of regular students. In addition, the relationship between adult academic performance and such demographic variables as age, sex, marital status, matriculation status, part-time study, and residency (in or out of the university district) was investigated.

The analysis revealed that the mean academic performance of adult students (age 25 years and over) was significantly higher ($p<.01$) than that of the regular college-age students. With regard to previous studies which had suggested that "mature students" (non-matriculated adults) achieved at a higher level than regular students, the findings in the present study were in the same direction but not statistically significant. Matriculation status at the time of admission, and attendance part-time or full-time appeared to have no significant influence on the academic achievement of adult students. There were marked differences between sub-populations of dult males and females and married and single students. Suggestions for urther research were made.

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Peggy Beagle

PEGGY BEAGLE

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Introduction

One educational problem that has gone virtually unnoticed in Canada until recently is that of the "mature student". However, most of the universities in Canada (and all universities in Ontario) have some provision for the admission and education of older students. So do the new community colleges. Provisions for accepting "mature" applicants are now quite common, and the students concerned are growing in numbers and importance to all universities.

One of the immediate problems for universities concerns the fact that many of these adults seeking to enrol in degree courses do not meet the published admission requirements. However, they may have a maturity and a body of knowledge and skills, gained from many kinds of private educational experience, that more than compensates for deficiencies in the formal requirements. In addition to this, there are other adults who, while meeting the formal admissions requirements, have been away from school for many years. The university, in attempting to select applicants with the greatest chance of success, and using high school averages as criteria for admission, must try to compare the adults' secondary school experience with that of the young graduates. A recent study (Flaherty, 1968) has shown that the greater the time lapse, the lower the prediction-criterion relationships become, and thus the use of high school marks for prediction is of less value

for adult applicants to universities.[1] This means the universities are faced with the problem of setting up admission requirements that protect their standards and at the same time are fair to adult applicants, and are considered fair by them. The extent of the problem is exemplified in the great variety of methods used by different universities in their attempts to select students who will be successful in their courses. In addition to this, institutions vary considerably in other practices and policies affecting adult students, such as probationary periods, scheduling of courses, facilities for study and laboratory work, library facilities, availability of counselling, and separate academic programs for adults. There appears to be little agreement about what is most effective, and decisions are often based on rather limited information. What research there is suggests that adult students compare very favourably with regular college-age students in performance.

Several factors, however, have combined to focus attention on the "mature student". The rapid advances in knowledge and technology are changing social and employment practices. Society is moving closer to a time when continuing education and retraining will be the norm rather than the exception. It is becoming increasingly necessary for people to develop competencies which may be later applied in several careers, as some jobs become obsolete and new occupations

develop. Automation and technological change is providing people with fewer work hours and more hours to spend as they choose. Many are looking to general education as well as to recreation to add some constructive creativity and meaning to this free time. For these reasons increasing numbers of adults are seeking to re-enter educational institutions. In many cases the point at which they left the formal system is not the appropriate point to recommence, because of values acquired or achievements that have occurred during their life.

Many other institutions are now becoming vitally interested in problems involving the education of adults. Numerous professional schools and societies are now engaged in some form of continuing education, as are those institutions offering courses in business administration or public administration for hundreds of senior executives. Governments which have initiated retraining programs in an effort to prevent the waste of manpower are also concerned. With such widespread interest, it is surprising that so little actual research has been carried out regarding the factors that affect the adult as he attempts to re-enter the educational system at the point most suitable to his present capacity.

The particular aspect of the problem covered in this study concerns those adult students who are enrolled in undergraduate university credit courses. It includes adult students admitted under the so-called "maturity clause" - the arrangement whereby post-secondary institutions waive the normal entrance requirements and admit some students

on the basis of their having reached a certain age.

Usually older students enrolled in graduate or professional programs are not described as "mature students", but are simply considered to be students who are older than average. Many universities now have "older than average" students enrolled in regular undergraduate programs, both part-time and full-time. However, the term "mature" is now used in many universities to describe a particular kind of applicant - one who does not meet the normal admission requirements, who is anywhere from twenty to twenty-five years of age, and who is often required to have been away from formal schooling for a period of at least two years. This use of the term has nothing to do with the qualities of maturity, whether physical, emotional or intellectual. Some universities question the appropriateness of the term "mature" for this group of students because, if education implies growth and is a process toward maturity, then there is no such thing as a mature student. There is continuing education that begins at birth and ends at death. Along this continuum there may be "older than average" students, based on some arbitrary chronological age limit, who are matriculated or non-matriculated, but this may have little to do with maturity. People holding this view believe that the term "mature" should not be applied in this fashion,that there should be some other designation to describe those of a certain age who could not otherwise gain entrance to university.

Other factors limit the usefulness of the term "mature". The age span alone makes comparisons difficult between students so defined at various universities. For example, a twenty-four year old student may not meet the criterion for maturity at one university but find that he has been considered "mature" at another for three years. Some institutions classify all "older than average" students as "mature", regardless of high school matriculation. In some others the "mature student" loses his identity as such when he successfully completes whatever probationary period is required. He then becomes just another student or a "regular" student and no special records are kept of his progress.

In spite of the difficulties mentioned, and because the term "mature student" is in common use, adult students who were admitted to university with less than the normal prerequisites are designated as "mature students" or non-matriculated students throughout this paper, and the terms used interchangeably. The term "adult student" refers to the "older than average" student who has been away from formal schooling for at least two or more years, in contrast to the "regular" or "college-age" student who proceeded directly to university upon successfully completing Grade XIII or its equivalent. Forming a part of the adult student group are the "mature" or non-matriculated students.

Procedure of the Enquiry

Studies relating to adult university students in Canada and the United States were reviewed. In order to ascertain the policies and practices in Ontario universities as they affect adult students, the writer interviewed registrars, admission officers, extension directors, and other personnel in nine Ontario universities. The interviews were tape recorded and followed fairly closely the invterview guide contained in Appendix C. Relevant literature was also received from several universities. To gain information about adult students' experience in the light of the policies investigated, interviews were tape recorded with a number of students on the various campuses visited. At Lakehead University, in addition to tape recorded interviews with students and faculty, a questionnaire was administered to a further 150 students (Appendix D). Essays and other anecdotal material were collected. Finally, a statistical analysis, based on data collected at Lakehead University, was undertaken to compare the academic performance of the regular and adult students.

Related Research - United States

There has been considerably more research carried out in the United States than in Canada concerning adults enrolled in university courses. Some of the studies are noted in the bibliography for the interested reader. These have not been interpreted because the data were

collected in a way that makes comparisons difficult, as there is no real American equivalent to the "mature student" clause operative in most Canadian universities. However, the main conclusions from this research supports the contention that, under good conditions, adult students will perform as well as, or better than, the regular students.

Canada

Dr. Alan Thomas, Director of the Canadian Association for Adult Education, conducted a preliminary enquiry in 1963 covering the "mature student" provision as it affected universities.[2] Many of the general observations contained in the study are still valid. In particular, it stressed the necessity for universities and Departments of Education to act jointly in dealing with the two main problems concerning adult students: firstly, the evaluation of past learning without total reliance on high school grades, and secondly, the right of the competent older student to re-enter the educational system which is geared mainly for the young. The report suggested that the problems be discussed and debated publicly, because public institutions in particular have a responsibility to make known to citizens what their educational opportunities are.

Since the 1963 report some Masters' theses and unpublished reports and surveys by admission and extension departments have looked at admissions policies, or compared the performance of "mature"

students with that of regularly admitted students. The most recent and comprehensive survey of policies affecting "mature" applicants in Ontario was conducted by the University of Ottawa in 1968.[3] However, since the selection procedures for "mature students" in most universities are in the process of revision, much of the information contained in that survey will be outdated. In addition to this, the universities of Toronto, York, Guelph and Trent, and the Ontario Institute for Studies in Education have given some preliminary consideration to other aspects of the problem, such as selection of "mature students", counselling, effective study habits, motivation, etc. However, no satisfactory estimate has been made as to the effectiveness of these policies from the point of view of the adult student. In particular, there is little information on such questions as the feelings of the adult student about his own competence, helpful or hindering experiences with staff and other students, availability of library or laboratory resources, flexibility of time schedules, admission and financial policies.

While the number of studies in Canada relating to adult students is increasing, the available data are still relatively scarce. Many of the data collected during the past year in Ontario are at this time (summer 1970) still in the process of analysis and yet to be published. Extension departments and admissions offices have expressed a desire to carry out investigations regarding the progress of their "mature students",

but have been hampered by lack of time and adequate staff for the task.

The evidence obtained from the studies thus far undertaken is largely discussed in terms of percentages and numerical values rather than statistically reported in terms of significant differences. For example, fifteen universities surveyed by the University of Ottawa reported that "mature" applicants proved to be satisfactory students. Trent University indicated that the failure rate of mature applicants was lower than that of regular students, while the University of Western Ontario reported a slightly higher failure rate for the "mature students" as compared to the regular students (20% vs. 13%). However, in the latter case the grade of passing for "mature students" was higher than for the regular students (B- vs. C+).[4] Evidence presented by the Extension Division of the University of Toronto disclosed that 10.9% of the Extension students obtained first class honours as compared to 9.8% of regular students in University College where selection standards are considered to be high.[5]

All of the evidence reviewed from investigations in other provinces indicated that the academic performance of adult students compared very favourably with that of regular students. For example, a recent study at the University of Lethbridge showed that while "mature students" obtained a lower mean average on the College Qualification Test than did the regular students, prior to entering freshman

year, they achieved the highest grade-point average of the five experimental groups.[6] Similarly, a study in the Faculty of Education, University of Alberta, noted that the 1968-69 grade-point average for "mature students" was equal to (in the case of males) and greater than (in the case of females) that of the regular student body as a whole.[7] Another recent study, conducted at the University of British Columbia, involved 86 "mature" transfer students from a community college to the university. For the purpose of this study the "mature student" was defined as a person 25 years of age or over at the time of admission to the community college. While no breakdown was given on matriculation status, it is probable that at least some of these students would not have met the normal university admission requirements. The results of this analysis indicated that the "mature" transfer student had a higher ratio of upper class grades, and a failure rate one-half of that achieved by the regular college-age students.[8]

Most educators agree that adult students are strongly motivated and have a sincere desire to learn. At the same time many believe that courses for adults should be non-credit since the content must be "watered-down" to compensate for the supposed limitations of older students, particularly those pursuing their studies at night. This general belief that adult students are not capable of regular university work is not supported by the research findings. For example, one study (Hackett & Farnum, 1963) tested the mental ability of 1,042 extension

students, with a median age of 30, at the University of Rhode Island. The results indicated that the mental ability for all students tested was not only above average when compared with the general population of the country, but the average score obtained on the test was higher than the average score for regular daytime students.[9] Other beliefs that run contrary to the evidence concern the academic performance of the part-time student. Two mutually inconsistent criticisms are frequently heard. One charge commonly made is that the part-time student's work is always inferior to the regular day-time student because his usual full-time job limits the time and energy he can devote to his studies. Conversely, the other charge is that it is relatively easy for the part-time student to obtain high grades because he can devote much time to one or two courses, or because it is easier to retain the content of a limited number of courses. Part-time study is presumed to compensate for the supposed inferior academic ability of the adult student. Those who hold this view believe that the part-time student would achieve at a much lower level if required to attend university full-time. The research in Canada regarding the performance of adult students is not extensive, but all of it suggests that adult students perform equally as well as the regular students. The commonly held belief among many university people that the adult or part-time student is a poor match for the regular student is contary to the evidence.

Problem Areas

In this exploratory study to ascertain the effectiveness of current policies affecting adult students in Ontario universities, no rigorous method of sampling was attempted. The intent was to simply draw out the range of experience and possibly the emergence of some patterns. Five problem areas were identified from the data collected: admissions policies, counselling, study skills, facilities for study, and financial practices. The data were consistent from all universities visited. One factor that seemed central to all the specific problem areas was the previously mentioned low expectations of many university people regarding the ability and performance of adult students, particularly part-time students. However, one important qualification should be made. Usually the people dealing directly with the adult students - the extension departments, the admissions people concerned with "mature" and part-time students, and the faculty actively engaged in teaching the adults - were trying their best to accommodate these students, often against difficult odds. Yet the belief in the supposed inferior ability and performance of "mature" students was encountered very often. This belief was even expressed by some faculty members who were teaching high achieving "mature students" but were unaware of their "mature student' status.

With the ever-increasing numbers of adults enrolled in universities it would appear that the problem of accommodating the

adult student is not a peripheral problem today, although it has always been treated as such. Some indications of the importance of the matter for university planners of the future are the enrolment trends.

Increases in Adult Student Enrolment

One of the national trends noted in the most recent study prepared for the Economic Council of Canada is that while full-time university enrolment tripled from 1951-52 to 1967-68, part-time enrolment increased twenty-three times.[10] This means that part-time enrolment increased from six percent of total enrolment to twenty-seven percent in the years abovementioned. The report of the Presidents' Research Committee stressed the fact that part-time enrolment was growing steadily and would continue to do so but that it was very difficult to project numbers with any degree of confidence due to rapidly changing conditions. Thus their 1966 projection of a maximum 28,050 part-time students in Ontario in 1967-68[11] fell quite short of the actual enrolment of 31,020. In addition to these estimates there is the prediction of Dr. D. T. Wright, Chairman of the Commission on Post-Secondary Education in Ontario, that by 1975 perhaps half or more of all students in university will be part-time This major shift to part-time study, as one of the alternatives to escalating costs of higher education, was also cited in the Report of the Committee on University Affairs 1968-69.[12]

There are additional factors, however, that may make these estimates rather conservative. While the Dominion Bureau of Statistics reported that part-time enrolment increased at a faster rate than full-time enrolment (about 18% in 1967 over 1966) this was attributed to the fact that apparently a number of full-time students had changed their status to part-time students.[13] However, this might also be accounted for by the increasing numbers of women enrolling in university. The Dominion Bureau of Statistics notes the trend in recent years for the increase in full-time enrolment of women to be higher than that for men (4.9% for women to 2.6% for men from 1967-68 to 1968-69). Along with this is the higher proportion of part-time women students to the total part-time enrolment than of full-time women students to total full-time enrolment at both the undergraduate and graduate level.[14]

Factors such as these could indicate that many more women are likely to want to get back into university work, and that many of them at least, will start their studies part-time. The trend has been for families to be completed at an earlier age. At the present time, the average woman has her last child at age twenty-eight or twenty-nine, which means that from age thirty-five on, for twenty or thirty years, women will have the opportunity of returning to a career or getting ready for a new one, all of which will require further education.

Another factor that can be expected to increase university enrolment is the role of the community colleges and the polytechnical

institutes in making continuing education available for many who never expected to go on to higher studies. When the four year courses were introduced into the high schools, and it was discovered that the course was terminal, the students would not accept this and insisted that there be a possibility of furthering their education.[15] It is equally unlikely that the students graduating from the community colleges, who have developed an appetite for education and who desire upward mobility, will accept their present courses as terminal.

There is also the data from the 1963 study of McFarlane and Hall that revealed that of all the young people entering high school since World War II only about one-fifth of the brightest ever entered freshman year.[16] This means that four out of five of the most able people are workers somewhere and many may want to come back to study, and probably will. Most of them are likely to start as part-time students, for it is very difficult when one is thirty or forty years old to manage financially otherwise.

In any event, universities which have, up to the present, regarded the part-time student as a nuisance or a peripheral person, may be finding that a large part of their future activity will be dealing with part-time students. Many of these will be older and many will have been away from school for a number of years, for the part-time students and the "mature students" are often the same people.

Summary of Information Obtained on Visits to Universities

As reported earlier, the investigator visited nine universities in Ontario and one each in Manitoba and Quebec. Detailed tape recorded interviews were conducted with administrators, students, and faculty. The information obtained has been briefly summarized under five main headings. Each area in its own right deserves much further examination which is beyond the scope of this preliminary exploration.

Admission Policies

The selection procedures in Ontario universities are extremely varied and are constantly evolving. A recent survey (Pollock, 1970) grouped these procedures into four categories: interviews, pre-university courses, conditional admission to university, and aptitude tests. These selection devices are used singly or in any combination by each university surveyed. Serious flaws were pointed out for each method, for example, the low correlation of a single Grade XIII credit with first year university averages. The use of aptitude tests designed for regular secondary school applicants and used for screening adults was also questioned. The general dissatisfaction of admissions departments with the available selection devices is reflected in the following exerpts from the report: ". . . at present little is available to us in assessing the

non-cognitive criteria . . . some may stoutly defend the use of the present aptitude tests, [but] Ithink we do so because we are aware that they are better than nothing in assisting us in selecting "mature" students . . . there is now little to assist us in the selection of "mature" students and what we really rely on is our own judgement and common sense."[17] The interview data support these comments. The departments concerned were well aware of the limitations in their selection procedures and indicated that a great deal of research is needed in this area.

Students reported difficulty in finding out about admission policies in many instances, one reason being that these policies are often not well publicized, and another is that they are constantly changing. This variation in policies means that students can move from university to university only with considerable difficulty.

The adult student may encounter other obstacles that block his entrance to university. These are the many restrictive policies, largely unpublished and unofficial, and of which the student is usually unaware. Some universities have restrictive quotas, some have age restrictions, while others have restrictions regarding admission to certain faculties. Also various faculties within a university may have their own age restrictions regardless of the university's stated policy. Some universities do not allow part-time students to attend classes during the day, even though this may be the most suitable time

for the student. One university presently allowing this day-time attendance in very limited numbers stated that if the numbers of students applying presented a problem they would not be allowed to register. There are other discriminatory practices affecting part-time students. For example, one university's stated policy allows the full-time student two failures. In other words, the full-time student does not have to make up the two failures, he may graduate with only thirteen credits, whereas the part-time student is barred from the university after more than one failure. In this instance the policy is under review and a degree by credit approach is being studied.

COUNSELLING

There appeared to be a great variation in the type and amount of counselling available. This ranged from an almost total lack of any kind of counselling to a few fairly adequate programs. While some universities thought their academic counselling to be sufficient, from the students' point of view it was ineffective because it was not geared to their needs. In particular, the students found no real help in career planning, or in relating their courses to possible careers. They perceived the academic counsellors as having a very limited knowledge of, and little interest in, the relationship between the courses offered and future vocations. In fact many reported that their questions relating to employment opportunities in various fields appeared to

indicate to academic counsellors that the student's motives for attending university were somehow unworthy. By and large, students indicated that they received more assistance in planning courses from fellow students in upper years.

There appeared to be little help given the student in appraising his strengths and deficiencies so that he might develop. Aptitude tests seemed to be used mainly as screening devices, or as rationales for excluding students, rather than as diagnostic tools in course planning. Because of this most students interviewed had a very negative attitude toward testing programs. This seemed to be a fairly general attitude among students and not limited to the adults.

Several faculty members interviewed saw the main problem of the adult student to be that of self image. They felt that the adult student had difficulty in perceiving how he stood in relation to the regular student both academically and socially, and that he was often isolated both from faculty and other students. A suggestion was made for using student stewards to bridge this gap, especially in the larger universities. One small university had assigned all students to a supervisor of studies for their entire stay at the university. In addition to this, tutorial groups of not more than six persons seemed to provide the necessary contact between faculty and students. An informal type of counselling developed from these contacts and students did not appear to feel the lack of a formal counselling service.

Many universities were experimenting with some type of orientation program, ranging from a single "social" evening, or a day of special lectures, to practical courses of varying length prior to commencement of classes. In the latter case counselling was combined with assistance in study skills.

One university with a fairly extensive counselling service for full-time students, pointed out that this service was not available for summer students or for "mature" students, although it was greatly needed. However, the counselling service in this university had organized a special orientation program for this neglected group. Student comment on this program indicated that it had provided them with a chance to talk and to share experiences with other adult students, and had assisted them in becoming integrated into the university. But they expressed disappointment that this was the only contact with the counsellors available to them. The spokesman for this counselling service believed that one full-time counsellor should be available for the up to 300 adult students, or failing that, the provision of a part-time counsellor who would work a couple of evenings a week. A similar interest in part-time counselling was mentioned at other universities.

Most of the university personnel dealing with counselling were critical of the lack of funds provided for this necessary service. The data collected indicated great gaps in counselling facilities and pointed up the need for research in this important area.

Study Skills

From interviews with faculty it would appear that a great number of students arriving at University are deficient in study skills, particularly in the areas of research papers and oral presentations. Many professors also indicated that assistance in developing study skills was considered remedial education and therefore was not the function of a university.

Certainly, a great majority of the adult students interviewed had experienced difficulty in this area. Either they did not develop good study skills to begin with, or they had not kept them in practice, or they *thought* they lacked these skills and had regressed in their ability to learn. It appeared that one or more, or a combination of these three factors were common to most adult students returning to formal education. In most universities visited it was found that little help was provided for students to polish up skills around the use of books, taking notes, oral presentations, writing examinations, library research, and the writing of term papers. Some of the universities made passing reference to study habits and skills during orientation programs, usually in the form of short lectures and suggested readings. Students preferred a more practical approach, and many had attended reading laboratories where available to increase their reading speed and comprehension.

Almost without exception, interview data from students on all campuses indicated a need for assistance prior to, or early in, their

university career, in the writing of term papers. This has become increasingly important of late as some universities have dispensed with examinations and students are evaluated on the basis of a number of term papers, or a combination of term papers and oral presentations. A majority of the students interviewed were of the opinion that lectures and suggested readings were not effective methods for developing study skills. Most first year English courses provided little practical help in the writing of term papers.

An interesting development in the Extension Department of the University of Toronto is the writing laboratory, open to any student who desires help in the preparation of term papers. The lab is open afternoon and evenings and is staffed by graduate students who provide assistance in the methods of organizing and researching term papers, and who will criticise work in progress. Many students newly arrived in Canada and experiencing language difficulties find the service very useful. Students interviewed expressed very favourable reaction to the laboratory. Some students found that practical assistance in the preparation of one term paper was sufficient, others returned when they had specific problems. All reported gains in self-confidence which enabled them to work independently in a more effective fashion.

From the data collected it would appear that further investigation in the area of study skills is warranted.

Study Facilities

Part-time students experience the most difficulty with study facilities. By and large, university policies and practices simply do not take the part-time student into account. For example, in one university students who attended classes in the evening reported that no tutorials were provided for them, but were for the day-time students.

Students were almost unanimous in their criticism of library facilities, particularly those enrolled in courses off campus found library services to be completely inadequate. In one off campus location in Northwestern Ontario students reported making 300 mile trips to the neighboring province to obtain books required for reading. The majority of part-time students interviewed criticised library regulations affecting loan periods and reserve use. These regulations are usually set up for full-time day students and penalize the part-time student who may have only one class a week. The inaccessibility of all university facilities at night, on Saturdays and Sundays, on holidays, and all summer, was found to be a source of difficulty for many adult students, with the library being most frequently mentioned.

Many students voiced the opinion that the present limited use of university resources was inefficient and costly. They were critical of tax money being expended on enlarging physical facilities which were not then

utilized to the fullest extent. The consensus seemed to be that facilities provided by public tax money should not be operated in a manner which excluded the very people paying for them.

Financial Policies and Practices

Financial policies tend to restrict and make things difficult for the adult part-time student. They are organized not in his interest, but in ways which are against his interest. For example, a brief of the Association of Part-time Undergraduate Degree Students of the University of Toronto to the Joint Subcommittee on Finance states: "There is no capital formula for part-time students and no student loans. It is not surprising that this second class treatment by the Provincial Government in turn influences the policy of the University towards its part-time students."[18]

In a similar vein, the Atkinson College Association in a Brief to the Committee on University Affairs, criticized current financial policies:

> The need to incorporate an allowance for part-time students in the interim capital formula or any final capital formula has been well documented and agreed upon. . . . but what is required now is for continuing provision, on an equitable basis, to be made within a formula.[19]

Discrimination against the part-time student is also noted with regard to operating funds:

> . . . the Provincial Government still requires that six full course registrations at Atkinson are necessary to receive one full-time

> equivalent, whereas only five full course registrations are required in the full-time programme. . . . the Association wishes to go on record as strongly opposing the present method of calculating full-time equivalents on the basis that it is not equitable and that if the present method be continued, then the number used in the division of full course registrations should not be greater than five where Atkinson College is concerned.[20]

Regarding student aid, some rather strange paradoxes exist. The University of Toronto Extension Students' brief points out that it is now possible to acquire a degree in three years through part-time study, by taking three courses in the winter and two in the summer. Therefore it is possible for a student to work full-time and yet obtain a degree in the same length of time it takes a full-time student. Yet the self-supporting, tax-paying, part-time student is accorded second-class treatment.

Students at another university called attention to the fact that on their campus it was possible to become eligible, as a full-time student, for the non-repayable grants and interest free loans by paying for five courses but only taking four. His counterpart, the part-time student, often takes five courses during the same year, by way of evening, intersessional and summer classes. In this case he may graduate a year ahead of the full-time student and still be working full-time and supporting a family. However, he is not eligible to obtain even an interest free loan to finance his studies. Some part-time students are able and willing to finance their further education with no assistance. For many others it is financially impossible. As Pollock (1970) points out: "many are seeking higher education in order to . . . extricate

themselves from a socio-economic cul de sac."[21] These are matters of serious discrimination and concerned students on many campuses visited.

Adult students also indicated that discrimination existed in the awarding of scholarships and fellowships. Older students were rarely considered. The Atkinson College Students' brief mentions that the majority of donors of scholarships and bursaries s ipulate that recipients be full-time students only.

Many part-time women students, who were caring for children at home and thus unable to work to finance their further education, were extremely critical of present financial policies.

In general, part-time adult students appeared to be well aware that escalating educational costs add to their tax burden. In most cases they were not seeking non-repayable grants. In fact many older students were of the opinion that grants should be abolished. Rather, they believed that all students, regardless of whether they attended university full-time or part-time, daytime or evening, should be eligible for whatever repayable loans were necessary to finance their education.

Many of the interview data lend support to the charge made in the Atkinson College Association brief that

> Part-time students work, study, pay taxes, vote and do not demonstrate. The result: an almost complete lack of recognition of the contribution they make, and an almost total indifference to their needs.[22]

An Analysis of the Academic Performance of Adult Students

Most of the available studies covering the academic performance of adult students are descriptive. Results are discussed in terms of percentages and numerical values. The investigator believed that an analysis of the performance of adult students compared to regular students, using inferential statistics, would help clarify the issue. Data were available at Lakehead University and an examination was made of the academic performance of a representative sample of regular students and adult students.

The Problem

This section of the pilot study sought to determine if there were any significant differences between the performance of adult students and that of regularly admitted "college-age" students enrolled in undergraduate university credit courses. In addition, the study was designed to test the relationship between certain measurable factors and academic achievement. These demographic variables included sex, marital status, matriculation status, attendance on a full-time or part-time basis, and residency (in or out of the university district).

The Setting

Lakehead University offers a traditional academic program with regular credit courses from the freshman to the Masters level. Separate academic programs are not offered for "regular" students and part-time, or what are usually referred to as "extension" students. The admission policies and academic regulations are the same for all students. The time-table is so drawn up that degree courses are available throughout the week between 8:00 a.m. and 10:00 p.m. daily, and on Saturday mornings. Degree credit courses in the Faculty of Arts are also available off campus in twelve Northwestern Ontario centres, with a minimum registration requirement of fifteen. The courses are identical with those on campus and are taught by faculty members preferably as part of their regular load.

Lakehead University has provided for the admission of special adult applicants who do not have the minimum prerequisites for entry, provided they are 21 years of age or older and have been away from formal schooling for more than two years. The admission policies for these non-matriculated students who are older than average are still evolving. The admissions criteria have been liberal from the outset and only a relatively small number of applicants have been rejected. In doubtful cases the director of Admissions and Extension administered the ETS Standard English and Vocabulary Test,

with the cut-off point at the 25th percentile. Students who scored above this were presumed to have the ability in English to progress in their studies. This test is the only one that has been used, and this only in the last two years to any great extent. The students making up the study sample were mainly admitted on the basis of an interview with either the Director of Admissions and Extension or the Registrar. In the case of "mature students" an attempt was made to take into account the level of motivation, any previous educational activities including those of a non-formal nature, and any skills that may have been acquired through life experience. In borderline cases, particularly where applicants indicated strong motivation, the above-mentioned test was employed to assure that the applicant possessed the necessary minimum amount of scholastic ability judged necessary for successful academic performance.

Definitions

A "mature student", for the purposes of this study, was defined as an undergraduate student who was 25 years of age or older as of December 31, 1968, who had been away from formal education for more than two years, and who did not meet the minimum admission requirements of Lakehead University. Students in this category were designated as non-matriculated students.

A regular student was defined as an undergraduate student who was either 19 or 20 years of age as of December 31, 1968, who had proceeded directly to university from Grade XIII or its equivalent, and who met the normal admission requirements of Lakehead University.

An adult student was defined as an undergraduate student, either matriculated or non-matriculated, who was 25 years of age or older as of December 31, 1968. An adult student who did not meet the usual admission requirements of Lakehead University was designated as a non-matriculated adult student, (i.e. a "mature student").

A part-time student in this study referred to an undergraduate student who was 25 years of age or older as of December 31, 1968, either matriculated or non-matriculated, and who was enrolled in less than four courses during the academic year 1968-69 (two semesters).

Off campus designates the twelve centres in Northwestern Ontario, extending from Kenora in the west to Manitouwadge in the east, where the Faculty of Arts of Lakehead University offers degree credit courses.

Academic achievement was defined as the student's standing in all courses completed in the academic year (two semesters) ending April 30, 1969, as indicated by the numerical average. The number of courses completed ranged from one to seven (see Appendix A).

Method

Subjects

The subjects were 172 undergraduate students enrolled in credit courses at Lakehead University, and selected by a random sampling procedure. Details of the sample selection are given in Appendix B. The sample of 114 adult students was divided into 3 experimental groups: full-time students, part-time students on campus, and part-time students off campus. The control group was composed of 58 regular students, all of whom attended full-time.

The age range of the adult students was 25 to 63 years, with 51% between the ages of 25 and 29 years of age. The regular students were either 19 or 20 years of age. Experimental and control groups were represented in the four undergraduate years as follows:

Group	Year			
	First	Second	Third	Fourth
Experimental	54%	25%	14%	3%
Control	16%	74%	10%	0

Descriptive data on the subjects were obtained from admission records and are given in Tables A1 to A32, Appendix A.

Procedures

Previous research cited dealt with adult students in general (Dennison & Jones, 1969), with non-matriculated adult students (Perkins, 1968), and with part-time adult students (Gruetzner, 1969). The findings indicated that all categories of adult students compared favourably with regular students. However, the programs and facilities were different in each case. At Lakehead University it was possible to compare the various categories under more controlled conditions, as the program for regular, adult, and part-time students is one and the same.

On the basis of previous research findings it was hypothesized that the academic performance of all categories of adult students used in this research would be equal to, if not greater than, that of regular students. Specific predictions were as follows:

1. Adult students as a group would perform as well as, or better than, regular students.
2. Matriculated adult students would perform as well as, or better than, regular students.
3. Non-matriculated adult students would perform as well as, or better than, regular students.
4. Part-time adult students would perform as well as, or better than, regular students.
5. Full-time adult students would perform as well as, or better than, regular students.

In order to test for possible relationships between the five demographic variables and academic achievement the experimental group was divided into five dichotomous sub-groups and the means of each compared.

The criterion for academic achievement used was the student's numerical average for the courses completed during the academic year ending April 30, 1969 (two semesters). The demographic variables under investigation as having a potential relationship to academic achievement included marital status, age, sex, matriculation status, part-time or full-time attendance, and residency (in or out of the university district). Data on the criterion and demographic variables were obtained for each of the subjects from the admissions office and the office of the registrar, and were punched on standard 80-column IBM cards. The IBM 360 computer at Lakehead University was used for the statistical analyses.

Data Analysis

One of the purposes of the study was to compare the academic achievement of adult students and regular students. Means, standard deviations and t tests were computed for the total experimental group, five of its sub-groups and the control group of 58 regular students, as shown in Table 1. This table also shows the mean and standard deviation for the group of 29 subjects for whom matriculation status was not known (See Appendix B, p.68).

Table 1. The Mean Academic Performance of the Total Experimental Group and Six Experimental Sub-populations compared with that of the Control Group.

	N	MEAN	S.D.	t
Control	58	60.14	8.58	
Total Experimental Group	114	64.32	8.19	3.10**
Total Matriculated Group	45	64.96	6.51	3.10**
Total Non-Matriculated	40	62.85	9.82	1.43
Total Part-Time	66	64.94	8.12	3.17**
Total Full-Time	48	63.48	8.21	2.02*
Part-Time On-Campus	49	65.16	7.79	3.12**
Matriculation Status Unknown	29	65.38	7.75	2.74**

* $p < .05$
** $p < .01$

Table 2. The Mean Academic Performance of Five Experimental Sub-groups, Blocked on Five Demographic Variables.

	N	MEAN	S.D.	t
Male	64	62.41	8.16	2.90**
Female	50	66.78	7.54	
Married	71	65.62	7.55	2.19*
Single	43	62.19	8.73	
Matriculated	45	64.96	6.51	1.16
Non-Matriculated	40	62.85	9.82	
On-Campus	97	64.33	8.04	0.02
Off-Campus	17	64.29	8.97	
Part-Time	66	64.94	8.12	0.93
Full-Time	48	63.48	8.21	

* $p < .05$
** $p < .01$

A second purpose was to determine if there were any significant differences in academic achievement between dichotomous sub-populations of the experimental group. The means of these groups were compared and the summarized results are presented in Table 2. In the comparison involving matriculated and non-matriculated adult students, the number in each group was reduced as the subjects for whom there were no data on matriculation status (29Ss) were excluded.

An additional analysis, not included specifically in testing the hypotheses, was made. The experimental group was sub-divided according to matriculation status, and the ages of the students were tabulated in 5 year units. Means and standard deviations were computed for each age grouping of adult students and also for the control group. These are presented graphically in Figures 1 and 2. No tests of significance were performed because of the small N's in the upper age ranges.

Results

The evidence presented in Table 1 indicated that predictions 1, 2, 4 and 5 were supported. The mean performances of the total experimental group as well as the four sub-groups (matriculated, full-time, total part-time, and part-time on campus) were all significantly higher ($p<.05$) than that of the control group. However, the analysis failed to support prediction 3, although the results were in the indicated direction.

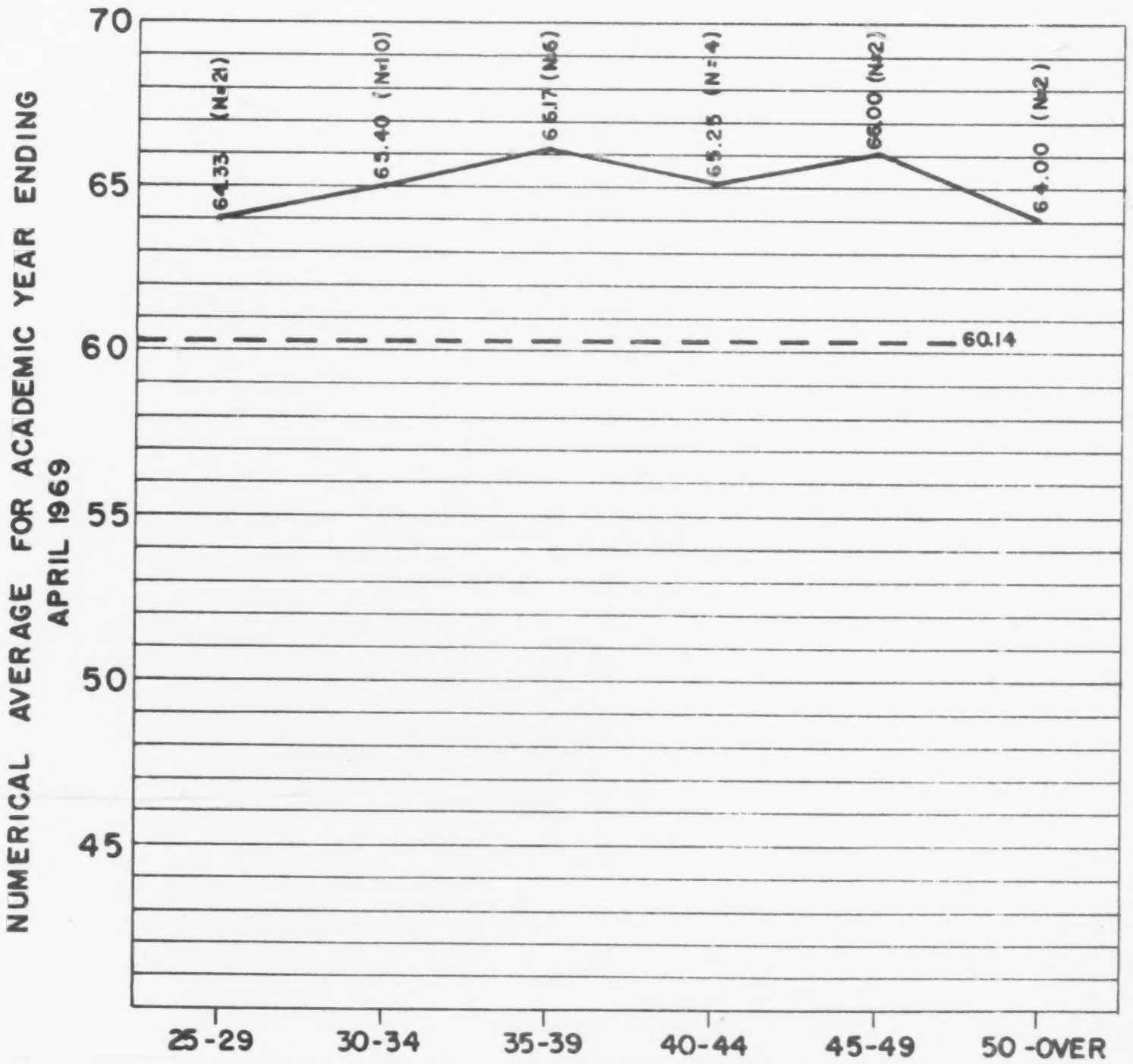
Table 2 provides the basic information regarding the relationship of the five demographic variables to academic achievement. There was no significant difference between the academic performance of adult students grouped by part-time and full-time attendance, by matriculation status or by location on or off campus. However, the academic achievement of female adult students was significantly higher ($p<.01$) than that of the male adult students, and the academic achievement of married adult students was signicantly higher ($p<.05$) than that of the single adult students.

The results of the analysis obtained by grouping the experimental subjects by age, presented in Figures 1 and 2, should be considered only as suggestive because of the small number of cases involved. It appeared that there was no noticeable trend in mean performance with increasing age, although the N's in the upper ranges were too small to provide meaningful results.

Discussion

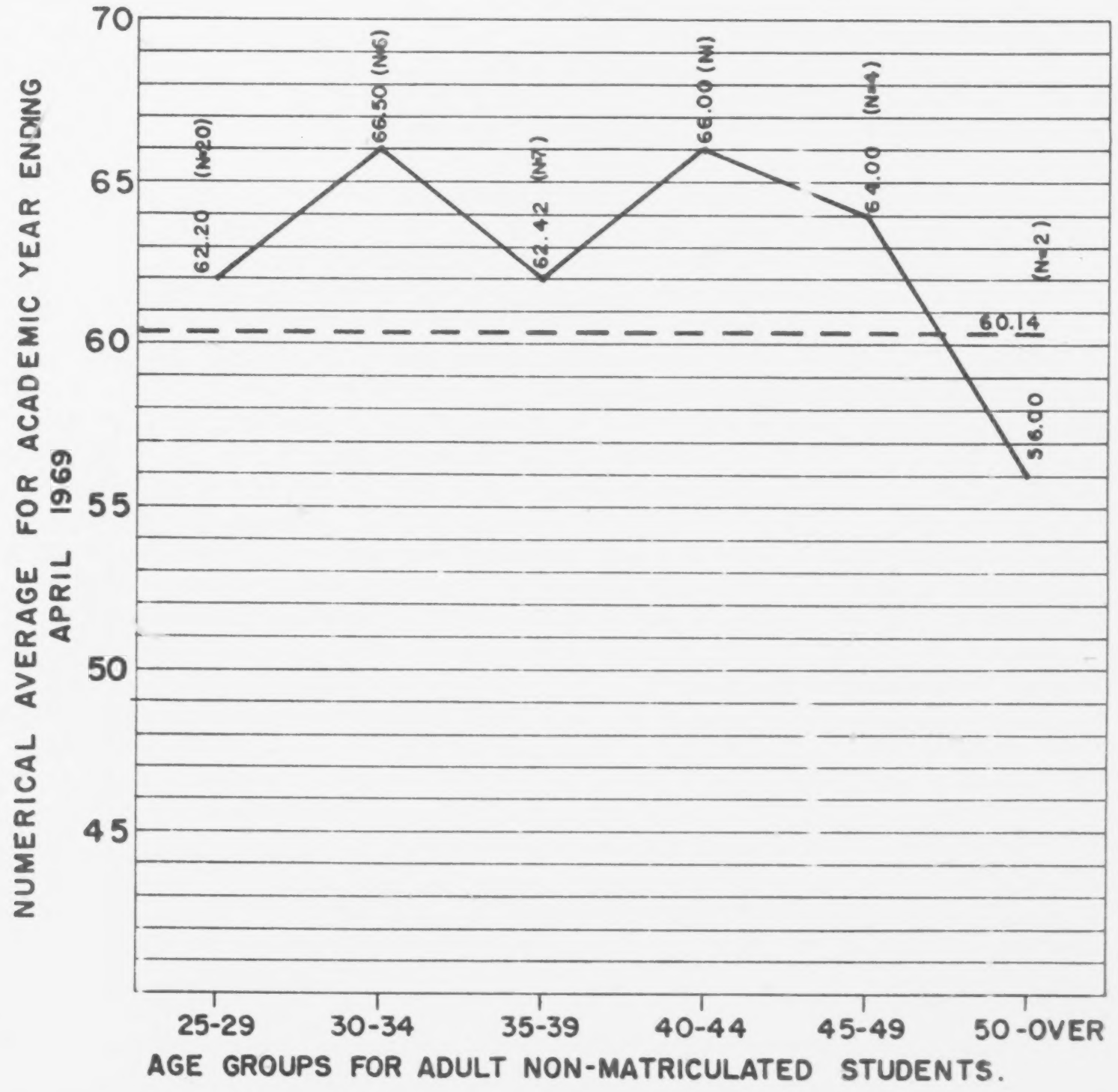
The significantly higher level of academic achievement of the total experimental group as compared with the control group lends support to the findings of Dennison and Jones (1969) which suggested that "older than average" students compared favourably with college-age students. With regard to non-matriculated students, Perkins (1968) and Vaselenak (1969) reported a higher mean grade point average for

FIGURE 1



COMPARISON OF MEAN EXAMINATION PERFORMANCE BETWEEN MATRICULATED ADULT STUDENTS GROUPED BY AGE AND REGULAR STUDENT CONTROL.

FIGURE 2



COMPARISON OF MEAN EXAMINATION PERFORMANCE BETWEEN NON-MATRICULATED ADULT STUDENTS GROUPED BY AGE AND CONTROL GROUP.

non-matriculated adult students than for regular students. The results obtained in the present analysis were in the same direction but were not statistically significant.

Because of the broad classifications used in this preliminary study only tentative conclusions can be made regarding non-matriculated adult students - the "mature students". However, the results of this analysis would tend to support the suggestion of Flaherty (1968) that admission policies should provide for the entrance to university of adult applicants who can demonstrate the necessary minimum of educability, regardless of previous formal schooling. The admission requirements for "mature students" at Lakehead University exemplify such a policy. Few would dispute the contention that the 25th percentile cut-off point on the ETS Standard English and Vocabulary Test represents a "minimum of educability". Yet the non-matriculated students admitted under this liberal policy have demonstrated an average performance that is equal to or better than that of the regular students. Flaherty further suggests that such a policy, based on present performance rather than past achievement, takes into consideration the body of knowledge gained from many kinds of private educational experience, and thus may be more appropriate to the applicant's present level of maturity than complete reliance on high school grades. Since the results of this study also suggest that there is no significant difference between the level of achievement at university of non-matriculated adults and matriculated

adults, completion of high school may not necessarily indicate success at university. Studies should be done which take into account the actual level of previous formal education attained, the number of years away from formal schooling and the present performance at university, in assessing the value of high school completion as a requirement for entrance to university.

At Lakehead University a few students have been admitted who scored just below the 25th percentile on the ETS Standard English and Vocabulary Test. A follow up study on "marginal" students should be undertaken.

Perkins (1968) attributed the higher achievement of the non-matriculated adult students to maturity and higher motivation. It is generally conceded that most adult students are highly motivated to achieve and there was no reason to believe that the adult students in the present study differed in this respect. In this study two factors, maturity and matriculation status, were used to differentiate between the adult students and the regular students. If successful matriculation indicates adequate academic preparation for university, and maturity implies life experience that may compensate for a deficiency in this preparation, then a possible explanation for the relative "success" of adult students may be in terms of these two factors.

The regular student, having recently completed Grade XIII successfully, is admitted to university as possessing the necessary academic preparation for college level work. The matriculated adult

student is in a similar position with the qualification that his study skills may be rusty and his math obsolete. The non-matriculated adult student is presumed to have deficiences in academic preparation to begin with. Yet in the present study and those previously cited, the academic performance of the adult students in general was significantly higher than that of the regular students. The present analysis indicated that matriculated adult students did not differ significantly from non-matriculated adult students but did differ significantly from regular students. Non-matriculated adult students did not differ significantly from regular students. A possible explanation is that matriculation and maturity together may contribute to a superior academic performance, whereas maturity alone may make possible an average performance by compensating for deficiencies in academic preparation.

Without benefit of an upgrading in study skills the performance of the non-matriculated adult students in the present study was on a par with that of the regular students. It would be reasonable to assume that special assistance in study skills, particularly the writing of term papers and examinations, would enhance their performance. Further investigation to assess the effectiveness of such upgrading is warranted.

The significant differences between male and female adult students and married and single adult students indicate that separate analyses should be done for these groups. Similarly, the results showing no apparent drop in mean performance with increasing

age is provocative and should be further investigated with larger N's in the upper age ranges.

The findings that part-time study had no significant influence on academic achievement would apply only to tho e institutions offering a single program to all students. This qualification also applies to the findings that off campus instruction appeared to have no influence on academic achievement. This result should be studied further using a larger sample and other university settings.

Summary

This exploratory study was designed to compare the performance of adult students and regular students enrolled in university credit courses. In addition it was designed to test the relationship between certain measurable variables and academic achievement. Within the limitations of the study and in terms of the variables tested, the following results were indicated:

1. Adult students (25 years of age and over) achieve at a higher level than regular college-age students who proceed directly to university from the secondary schools.
2. Matriculation status at the time of admission to university appears to have no significant influence on academic achievement.

3. Attendance as a part-time or full-time student appears to have no significant influence on academic achievement where the same academic program and regulations apply to all.
4. Married adult students are more apt to achieve at a higher level than single students.
5. Female adult students are more likely to achieve at a higher level than male adult students.
6. Residency (in or out of the university district) appears to have no significant influence on academic achievement, where the same program and regulations apply in all locations.

Since this study was confined to a university offering a single academic program for "Regular" students and those usually referred to as "Extension" students, these factors may not apply in institutions where separate academic programs are provided for the two categories.

Classifications used in this pilot study were rather broad, permitting only tentative conclusions. The scope of the investigation did not warrant greater detail but it has indicated areas in need of further research.

Conclusions

Data arising from interviews conducted in Ontario universities indicated that many academics and administrators believe that the ability and performance of older students, and particularly part-time students, is inferior to that of the college-age student. All of the evidence, however, is in the direction of showing that adult students compare very favourably with regular students, although several other kinds of research are indicated, as previously mentioned. The findings of the study would seem to indicate quite clearly that adult students warrant greater opportunities on the basis of performance, not on the basis of charity. In several significant areas research is lacking, and replication studies would be useful.

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Appendix A

ADULT (25 AND OVER) STUDENTS - FULL TIME ON CAMPUS

TABLE A1

Classification of Sample by Marital Status

Marital Status	Number	Percentage
Married	23	47.9
Single	25	52.1
Total	48	100.0

TABLE A2

Classification of Sample by Sex

Sex	Number	Percentage
Male	26	54.2
Female	22	45.8
Total	48	100.0

ADULT (25 AND OVER) STUDENTS - FULL TIME ON CAMPUS

TABLE A3

Classification of Sample by Age
as of Nov. 1, 1969

Age range (years)	Number	Percentage
19 - 20 (control)		
25 - 29	32	66.7
30 - 34	6	12.5
35 - 39	4	8.3
40 - 44	3	6.3
45 - 49	1	2.1
Over 50	2	4.2
Total	48	100.0

ADULT (25 AND OVER) STUDENTS - FULL TIME ON CAMPUS

TABLE A4

Classification of Sample by Average Obtained for Courses Completed 1968-69

Average	Number	Percentage
Below 50	1	2.1
50 - 54	4	8.3
55 - 59	8	16.7
60 - 64	9	18.8
65 - 69	16	33.3
70 - 74	7	14.6
Over 75	3	6.5
Total	48	100.0

TABLE A5

Classification of Sample by Degree Program

Program	Number	Percentage
Arts	33	68.6
Science	9	18.6
Science in Nursing	6	12.5
Commerce	0	0.0
Physical Education	0	0.0
Applied Science (Engineering)	0	0.0
Forestry	0	0.0
Total	48	100.0

ADULT (25 AND OVER) STUDENTS - FULL TIME ON CAMPUS

TABLE A6

Classification of Sample by Number of Courses

Number of Courses	Number	Percentage
One Course	0	0.0
Two Courses	0	0.0
Three Courses	0	0.0
Four Courses	8	16.6
Five Courses	28	58.4
Six Courses	12	25.0
Total	48	100.0

TABLE A7

Classification of Sample by Year

Year	Number	Percentage
First year	3	6.3
Second year	27	56.2
Third year	15	31.2
Fourth year	3	6.3
Total	48	100.0

ADULT (25 AND OVER) STUDENTS - FULL TIME ON CAMPUS

TABLE A8

Classification of Sample by Academic Standing Upon Entering University

Academic Standing	Number	Percentage
Matriculated	18	37.5
Non-Matriculated	20	41.7
Not Known	10	20.8
Total	48	100.0

ADULT (25 AND OVER) STUDENT - PART TIME ON CAMPUS

TABLE A9

Classification of Sample by Marital Status

Marital Status	Number	Percentage
Married	37	75.5
Single	12	24.5
Total	49	100.0

TABLE A10

Classification of Sample by Sex

Sex	Number	Percentage
Male	31	63.3
Female	18	36.7
Total	49	100.0

TABLE A11

Classification of Sample by Age as of Nov. 1, 1969

Age range (years)	Number	Percentage
25 - 29	16	32.6
30 - 34	9	18.4
35 - 39	10	20.4
40 - 44	7	14.3
45 - 49	4	8.2
Over 50	3	6.1
Total	49	100.0

ADULT (25 AND OVER) STUDENT - PART TIME ON CAMPUS

TABLE A12

Classification of Sample by Average Obtained for Courses Completed 1968-69

Average	Number	Percentage
Below 50	2	4.1
50 - 54	1	2.0
55 - 59	6	12.2
60 - 64	13	26.6
65 - 69	16	32.6
70 - 74	4	8.2
Over 75	7	14.3
Total	49	100.0

TABLE A13

Classification of Sample by Degree Program

Program	Number	Percentage
Arts	43	87.8
Science	1	2.0
Science in Nursing	4	8.2
Commerce	1	2.0
Physical Education	0	0.0
Applied Science (Engineering)	0	0.0
Total	49	100.0

ADULT (25 AND OVER) STUDENT - PART TIME ON CAMPUS

TABLE A14

Classification of Sample by Number of Courses

Number of Courses	Number	Percentage
One Course	32	65.3
Two Courses	15	30.7
Three Courses	2	4.0
Four Courses	0	0.0
Five Courses	0	0.0
Six Courses	0	0.0
Seven Courses	0	0.0
Total	49	100.0

TABLE A15

Classification of Sample by Year

Year	Number	Percentage
First year	35	71.4
Second year	7	14.3
Third year	5	10.2
Fourth year	2	4.1
Total	49	100.0

ADULT (25 AND OVER) STUDENT - PART TIME ON CAMPUS

TABLE A16

Classification of Sample by Academic Standing Upon Entering University

Academic Standing	Number	Percentage
Matriculated	21	42.9
Non-Matriculated	11	22.4
Not Known	17	34.7
Total	49	100.0

ADULT (25 AND OVER) STUDENTS - PART TIME OFF CAMPUS

TABLE A17

Classification of Sample by Marital Status

Marital Status	Number	Percentage
Married	11	64.7
Single	6	35.3
Total	17	100.0

TABLE A18

Classification of Sample by Sex

Sex	Number	Percentage
Male	7	41.2
Female	10	58.8
Total	17	100.0

ADULT (25 AND OVER) STUDENTS - PART TIME OFF CAMPUS

TABLE A19

Classification of Sample by Age as of Nov. 1, 1969

Age range (years)	Number	Percentage
25 - 29	6	35.3
30 - 34	6	35.3
35 - 39	2	11.8
40 - 44	2	11.7
45 - 49	1	5.9
Over 50	0	0.0
Total	17	100.0

TABLE A20

Classification of Sample by Average Obtained for Courses Completed 1968-69

Average	Number	Percentage
Below 50	0	0.0
50 - 54	1	5.9
55 - 59	4	23.5
60 - 64	4	23.5
65 - 69	2	11.8
70 - 74	4	23.5
Over 75	2	11.8
Total	17	100.0

ADULT (25 AND OVER) STUDENTS - PART TIME OFF CAMPUS

TABLE A21

Classification of Sample by Degree Program

Program	Number	Percentage
Arts	17	100.0
Science	0	0.0
Science in Nursing	0	0.0
Commerce	0	0.0
Physical Education	0	0.0
Applied Science (Engineering)	0	0.0
Forestry	0	0.0
Total	17	100.0

TABLE A22

Classification of Sample by Number of Courses

Number of Courses	Number	Percentage
One Course	12	70.6
Two Courses	4	23.5
Three Courses	1	5.9
Four Courses	0	0.0
Five Courses	0	0.0
Six Courses	0	0.0
Total	17	100.0

ADULT (25 AND OVER) STUDENTS - PART TIME OFF CAMPUS

TABLE A23

Classification of Sample by Year

Year	Number	Percentage
First year	14	83.5
Second year	3	17.5
Third year	0	0.0
Fourth year	0	0.0
Total	17	100.00

TABLE A24

Classification of Sample by Academic Standing Upon Entering University

Academic Standing	Number	Percentage
Matriculated	7	41.2
Non-Matriculated	8	47.0
Not Known	2	11.8
Total	17	100.0

CONTROL GROUP - REGULAR STUDENTS (19 AND 20 YEARS)

TABLE A25

Classification of Sample by Marital Status

Marital Status	Number	Percentage
Married	0	0.0
Single	58	100.0
Total	58	100.0

TABLE A26

Classification of Sample by Sex

Sex	Number	Percentage
Male	29	50.0
Female	29	50.0
Total	58	100.0

CONTROL GROUP - REGULAR STUDENTS (19 AND 20 YEARS)

TABLE A27

Classification of Sample by Age as of Nov. 1, 1969

Age range (years)	Number	Percentage
25 - 29	0	0.0
30 - 34	0	0.0
35 - 39	0	0.0
40 - 44	0	0.0
45 - 49	0	0.0
Over 50	0	0.0
Under 21	58	100.0
Total	58	100.0

TABLE A28

Classification of Sample by Average Obtained for Courses Completed 1968-69

Average	Number	Percentage
Below 50	6	10.3
50 - 54	8	13.8
55 - 59	12	20.7
60 - 64	13	22.4
65 - 69	12	20.7
70 - 74	5	8.6
Over 75	2	3.5
Total	58	100.0

CONTROL GROUP - REGULAR STUDENTS (19 AND 20 YEARS)

TABLE A29

Classification of Sample by Degree Program

Program	Number	Percentage
Arts	38	65.5
Science	12	20.7
Science in Nursing	4	6.9
Commerce	0	0.0
Physical Education	3	5.2
Applied Science (Engineering)	0	0.0
Forestry	1	1.7
Total	58	100.0

TABLE A30

Classification of Sample by Number of Courses

Number of Courses	Number	Percentage
One Course	0	0.0
Two Courses	0	0.0
Three Courses	0	0.0
Four Courses	13	22.5
Five Courses	37	63.8
Six Courses	6	10.3
Seven Courses	2	3.4
Total	58	100.0

CONTROL GROUP - REGULAR STUDENTS (19 AND 20 YEARS)

TABLE A31

Classification of Sample by Year

Year	Number	Percentage
First year	9	15.5
Second year	43	74.2
Third year	6	10.3
Fourth year	0	0.0
Total	58	100.0

TABLE A32

Classification of Sample by Academic Standing Upon Entering University

Academic Standing	Number	Percentage
Matriculated	58	100.0
Non-Matriculated	0	0.0
Not Known	0	0.0
Total	58	100.0

Appendix B

Sample Selection

At Lakehead University no separate records were kept of students admitted under the "maturity clause", and no data concerning the student's matriculation status at time of admission were available in the personnel records of the admissions office. In order to obtain the matriculation status of the students the investigator was required to draw the sample from the personnel records of the entire student body and submit the list of names to the registrar's office.

As the sample included students from all four undergraduate years, and since students were admitted under the "maturity clause" at age 21, the regular students of 21 years and over could not be differentiated from the non-matriculated adults by means of the admissions records. The following arbitrary age limits were used as the basis for drawing the sample.

The age criterion of "25 years and over" was used for the experimental group as it was assumed that these students had been away from formal schooling for at least two years, even at the fourth year level. The age criterion of "under 21 years" was used for the control group since these students would have had to meet the normal admission requirements. Of necessity all students between the ages of 21 and 24 years were excluded, both regular and non-matriculated.

The total student population as of February 1st, 1970, and grouped by attendance (full-time or part-time) and residency (in or out of the university district) was as follows:

Full-time on campus	2,340
Part-time on campus	1,051
Part-time off campus	454
Total	3,845

To meet the age criterion of 25 years and over for the experimental group all the student records were collected which indicated birth dates prior to and including 1944. For the control group all the records bearing birth dates 1949 and 1950 were used, giving an age range of either 19 or 20 years.

By means of a table of random numbers an approximate 20% sample was drawn from each sub-population as follows:

Sub-population		20% Random Sample
Full-time on campus (25 years and over)	221	60
Part-time on campus " " " "	279	60
Part-time off campus " " " "	104	20
Regular full-time (under 21 years)	320	60
	924	200

The records of 28 subjects were incomplete with respect to a variety of items and these subjects were dropped from the sample. The final distribution of the sample was as follows:

Experimental Groups (N = 114		Control Group (N = 58	
Full-time on campus	48	Regular full-time students	58
Part-time on campus	49		
Part-time off campus	17		

No matriculation status data were available for 29 adult students in the experimental group as follows: 10 full-time, 17 part-time on campus, and 2 part-time off campus. The matriculation status was recorded as "Not Known", with the subjects being retained in the sample. This group of 29 subjects was analyzed separately as shown in Table 1. The mean and standard deviation would seem to indicate that the majority of these were part-time matriculated students. In keeping with this the above-mentioned distribution shows 19 of the 29 students to be attending university part time.

These subjects were excluded only for the comparison of means between the matriculated and the non-matriculated adult students, where N = 45 and N = 40 respectively, as shown in Table 2.

The sample was considered representative of the student population of Lakehead University and adequate in size for the purpose of an exploratory study, and no replacements were made.

Appendix C

Interview Guide

1. Definition of the "mature" student.

   Usually older students enrolled in graduate or professional programs are not considered "mature" students.

   Many universities now have older students enrolled in regular undergraduate programs. Should these be considered "mature" students? Are they so considered?

   Is there a special group of older students at the university who are defined as or considered as "mature" students?

   Are all "mature" students taking courses for some kind of university credit? Are some of them engaged in work for a certificate or diploma? Are some in activities that do not lead to formal credit?

   Are all the "mature" students enrolled on the university campus? Are some found in other university centres? Are some found in activities "off-campus"?

   Are any "mature" students taking correspondence courses?

   Are "mature" students enrolled with the Extension Department or with regular teaching departments of the university?

2. University policy respecting the mature student.

   Does the university have a formulated policy respecting "mature" students? Is it a written policy? When was it developed? By what university authority? Has it been amended? Who is responsible for administration?

3. Numbers

   What has been the enrollment of "mature" students in the years since 1960? Is it anticipated that numbers will increase? Decline? Remain about the present figure?

4. Selection

   How are "mature" students selected? Are any tests administered?

What are the requirements respecting previous academic records? Who makes the decision? Is admission provisional? Are there any other qualifications about admission?

5. Counselling

Is any provision made for counselling "mature" students? Is this part of the regular program of counselling offered by the university? Is it a special program? Is there any follow-up of mature students after they have enrolled?

How do students find out about the program?

6. Study skills

Is any effort made to help "mature" students improve their study skills? When and how?

7. Information about the mature students

Are records kept about "mature" students?

Age?

Sex?

Marital status?

Socio-economic data?

Occupation (present and former)?

Previous formal education?

When and where?

Reason for attending?

Previous non-credit university activities?

When and where?

Degree or not?

Enrollment by department or subject?

Achievement in courses?

What mature students did after finishing the course?

8. Financial considerations

Does the university receive government grants for "mature" students?

Do mature students qualify for regular university fellowships or loans? Are there any special forms of financial aid for "mature" students? What about part-time students? Financial need? How do you assess such a need?

9. Program

Is the educational program of "mature students" different from other students? Are there any differences in the educational program between groups of mature students based on age, sex, or any other factor? Are examinations or any other educational assessment identical? Is the course content identical?

Do "mature" students take part in any university activities beyond the courses? Do they take part in student or university government?

Is there an organization of "mature" students? Are there any specific facilities?

10. Research

Have any studies been made respecting the "mature" student?

11. Anecdotal material

Is there any anecdotal material respecting the "mature" student such as essays on his experience, or recording interviews with "mature" students?

Appendix D

ADULT STUDENT SURVEY

LAKEHEAD UNIVERSITY

DEPT. OF PSYCHOLOGY
PEGGY BEAGLE

Your response is important to us in defining the current educational needs of adults proceeding to a university degree.

Whether or not you have definite plans for continuing your education at this time, please fill in the questionnaire as completely as possible.

Thank you for your participation and interest

.....

GENERAL INFORMATION

1. Sex

   Male_____
   Female_____

2. Marital Status

   Married_____
   Single_____
   Other_____

3. What is your present occupation?_____

   Full-time_____ Part-time_____ Housewife_____

4. If employed, do you receive financial aid from your employer with regard to your university courses?_____

EDUCATIONAL STATUS

1. "Mature" Student: (i.e. less than Grade 13 matriculation standing at time of admission to university)_____

2. Regular Adult Student: (i.e. successful completion of Grade 13 or its equivalent at time of admission to university) _____

3. Part-time student (less than 4 courses) _____
   Full-time student _____

4. Please indicate the number of years which have passed since your previous formal classroom experience (i.e., the number of years you have been away from school):

_____

5. If there are obstacles to continuing your education, which of the following are most important? (Check as many as apply, in order of importance, i.e., 1, 2, 3..)

Family responsibilities____ Limited choice of suitable
Work commitments_____ courses and hours_____
Volunteer obligations_____
Cost_____
Other (please specify): _____
_____ _____
_____ _____

UNIVERSITY COURSES

1. If full-time student, how many courses did you complete part-time?

None_____
1 - 3 _____
4 - 6 _____
7 and over _____

2. Did you receive academic counselling? (help in planning your future courses) _____

If yes, by telephone or letter_____
by personal interview_____

Comments on counselling: _____

_____

_____

UNIVERSITY ACTIVITIES

1. Do you take part in university activities beyond your courses? _____ (Check as many as apply)

None_____ Student government _____
Athletic program_____ Social activities _____
Student Clubs _____ Other _____
_____

2. Do you think adult students should have their own club, committee, etc.? _____

If yes, please comment on functions it should have (i.e., social only, academic only, or both)

_____

_____

_____

_____

People take university courses for many reasons. Since these reasons are often special to each individual, will you write, in your own words, why you are attending Lakehead University classes -- what you hope to get out of your total experience in this endeavour?

Will you indicate in your own words, any difficulties you may have encountered in your experience so far, and any suggestions you may have for changes that would facilitate the progress of the adult student?

ERIC Clearinghouse
OCT 7 1971
on Adult Education

N.B. An additional page is provided for further comments.

It is not necessary to sign your name.